

Appl. No. 10/590,684
Amendment dated December 16, 2009
Reply to Office Action mailed September 16, 2009

REMARKS

Reconsideration of this application and the rejection of claims 10-28 are respectfully requested. Applicants have attempted to address every objection and ground for rejection in the Office Action dated September 16, 2009 (Paper No. 20090911) and believe the application is now in condition for allowance. The specification and claims have been amended to more clearly describe the present invention.

Claims 10, 13, 14, 16 and 17 are rejected under 35 U.S.C. §102(b) as being anticipated by U.S. Patent No. 6,330,726 to Hone et al. Applicants disagree with and traverse this rejection for the following reasons.

Hone discloses a gangway system including a bridge for transporting passengers between an elevated level of a terminal building and the ground. This system includes a first bridge unit that extends from a vestibule and a second bridge unit having telescoping sections that extend from the first bridge unit to the ground. The system includes a driving means for the bridge that includes a beam 292, a wheel mechanism connected to the beam, and outer support legs 300 and 306 that extend along the ends of the beam to contact the ground.

In contrast, amended claim 10 recites, among other things, a boarding bridge including, “an elevation system for changing the height of the tunnel,” “a wheel mechanism for supporting the tunnel and driving the tunnel to extend or retract, provided with a beam for supporting the elevation system; wheels, attached to the beam through a

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bearing assembly and being in contact with the ground; an auxiliary supporting unit for providing an auxiliary support to the tunnel when the boarding bridge is moving or when the boarding bridge is located at a position, said auxiliary supporting unit being located outside of the wheels and provided with two leg supports, respectively attached under two ends of the beam and located outside of the wheels, wherein each leg support can be driven to extend and retract; and two foot portions respectively attached to one end of the leg supports, wherein the foot portions can be supported on the ground when the leg supports are extended and can leave the ground when the leg supports are retracted.

Hone fails to disclose such subject matter.

As stated above, the boarding bridge in amended claim 10 includes an elevation system that is used for changing the height of the tunnel and a separate auxiliary supporting unit that provides auxiliary support for the tunnel when the boarding bridge is moving or when the boarding bridge is located at a particular position. Thus, the auxiliary supporting unit provides additional support to the tunnel when it is on uneven ground but is not used to change the height of the tunnel.

In the Action, the Examiner refers to Figs. 3, 7 and 8 as disclosing the elevation system for raising and lowering the tunnel relative to the ground. Applicants disagree. Figs 7 and 8 of Hone disclose a system of telescoping legs that are used to raise and lower the height of the second bridge unit (Col. 12, lines 50-54). Specifically, as

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shown in FIG. 7, the legs are used to move the second bridge unit between heights 324 and 326. When the bridge is moved, the legs are retracted so that only the wheels are touching the ground as shown in FIG. 8. Thus, the legs of the elevation system shown in Figs. 3, 7 and 8, are for raising and lowering respective portions of the passenger tunnel or bridge and are not for auxiliary support as in amended claim 10. Further, Hone does not disclose any other elevation system that would be used to raise or lower the bridge.

Furthermore, the auxiliary supporting unit of amended claim 10 provides additional support to the boarding bridge when the bridge is moving as shown in Figs. 5 and 8, and also when the boarding bridge is stopped at a particular position as shown in FIG. 6.

The driving system 32 disclosed by Hone, however, only supports the passenger tunnel when the tunnel is at a particular location. Hone does not disclose that the driving system 32 is used when the passenger tunnel is moving. In fact, the legs cannot be extended when the tunnel is being moved because the bottom ends of the legs would drag on the ground and would damage the legs and make movement of the tunnel very difficult. Further, Hone specifically discloses that wheels 332 and 334 of the wheel mechanism 294 are lifted above the ground by a distance 328 as shown in FIG. 7. Also when the wheels 332 and 334 are driven to move, the support flanges 336 and 338 are raised above the support surface as shown in FIG. 8 (see Col. 12, lines 55-67). Hone

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therefore fails to disclose that the driving system 32 acts as an auxiliary support with the wheel mechanism 294 when the tunnel is being moved as recited in amended claim 10.

Additionally, the auxiliary supporting unit recited in amended claim 10 is configured to reduce the slant and wobble of the boarding bridge so that it is stable when passengers are moving through it. Specifically, the leg supports can be extended or retracted independently of each other to adjust to different ground surfaces near the leg supports.

In contrast, Hone discloses that the motors 301 and 304 associated with the right arm or support leg 300 and the left arm or support leg 306 operate simultaneously to move the legs relative to the inner support legs 302 and 308 (Col. 12, lines 55-58). Hone fails to disclose any independent operation of the motors and therefore fails to disclose independent operation of the left and right support legs relative to the ground to reduce the slant angle of the wheel mechanism.

For at least these reasons, Applicants submit that amended claim 10 and the claims that depend therefrom, are each patentably distinguished over Hone and in condition for allowance.

Claims 11, 12, 15 and 18-28 are rejected under 35 U.S.C. §103(a) as being unpatentable over Hone. Claims 11, 12, 15 and 18-19 depend from amended claim 10.

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Applicants therefore submit that these claims are patentably distinguished over Hone for the reasons provided above with respect to amended claim 10.

Amended claim 20 includes similar subject matter to amended claim 10. Specifically, amended claim 20 recites, among other things, a method for improving stability in a boarding bridge when the boarding bridge includes “an elevation system for changing the height of the tunnel,” “a wheel mechanism for supporting the tunnel and driving the tunnel to extend or retract, provided with a beam for supporting the elevation system; and wheels, attached to the beam through a bearing assembly and being in contact with the ground, wherein the method comprises: providing two leg supports which can be driven to extend and retract . . . providing two foot portions, each of which is attached to one end of the respective leg supports . . . detecting a direction and an angle at which the wheel mechanism is slanted when the boarding bridge is moving or when the boarding bridge is located at a position,” “extending one of the leg supports at a lower end of the beam to drive the corresponding foot portion to be supported on the ground when a detected dimension of the angle is larger than a first predetermined value,” and “retracting the leg support when the detected dimension of the angle is smaller than a second predetermined value.” As stated above, Hone fails to disclose an elevation system with a separate auxiliary support system for the tunnel, and leg supports that can be

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independently extended or retracted based on a detected angle of the slant of the wheel mechanism.

Accordingly, Applicants submit that amended claim 20, and the claims that depend therefrom, are each patentably distinguished over Hone and in condition for allowance.

In view of the above amendments, the application is respectfully submitted to be in allowable form. Allowance of the rejected claims is respectfully requested. Should the Examiner discover there are remaining issues which may be resolved by a telephone interview, he is invited to contact Applicants' undersigned attorney at the telephone number listed below.

Respectfully submitted,

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